

Amendments to the Claims

The listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Previously Presented) A method for controlling the slew rate of a signal driven by a signal driver characterized by an output impedance onto a transmission line of an integrated circuit device, comprising:

determining a desired slew rate for said signal;

calculating characteristic capacitance which together with said signal driver output impedance will produce a resulting time constant on said transmission line to achieve said desired slew rate;

calculating an interconnection path characterized by a redistribution metal characteristic capacitance substantially equal to said calculated characteristic capacitance.

2. (Currently Amended) A method in accordance with claim 1, wherein:

said calculated characteristic capacitance is selected such that for a desired 95% full signal transition time t , t is approximately equal to $3 \cdot R_o \cdot C_{RM}$ $3 \cdot Z_D \cdot C_{RM}$, where Z_D R_o -comprises said signal driver output impedance and C_{RM} comprises said redistribution metal characteristic capacitance.

3. (Withdrawn) An integrated circuit device, comprising:

a signal driver which drives a signal onto a transmission line;

redistribution metal connecting said signal driver to said transmission line, said redistribution metal characterized by a capacitance which causes a desired slew rate on said transmission line when said signal transitions from a first state to a second state.

4. (Withdrawn) An integrated circuit device in accordance with claim

3, wherein:

said characteristic capacitance comprises a value C_{RM} such that for a desired 95% full signal transition time t , t is approximately equal to $3 \cdot R_o \cdot C_{RM}$, where R_o comprises said signal driver output resistance.

5. (Withdrawn) A method for mapping a signal driver of an integrated circuit to one of a plurality of interconnect pads, comprising:

determining an output impedance of said signal driver;

determining a desired slew rate for a signal generated by said signal driver;

calculating a desired characteristic capacitance, said desired characteristic capacitance having a capacitance value which together with said output impedance of said signal driver will provide a resulting characteristic time constant required to achieve said desired slew rate on a transmission line connected to receive said signal;

calculating at least one possible interconnection path to each said plurality of interconnect pads;

estimating a characteristic capacitance associated with each said at least one possible interconnection paths;

selecting one of said possible interconnection path whose associated characteristic capacitance is substantially equal to said desired characteristic capacitance; and

mapping said output driver to said interconnection pad associated with said selected interconnection path.

6. (Withdrawn) A method in accordance with claim 5, comprising:

connecting said signal driver to a first end of said selected interconnection path; and

connecting said interconnection pad to a second of said selected interconnection path.

7. (Withdrawn) A method in accordance with claim 5, wherein:
said desired characteristic capacitance is selected such that for a
desired 95% full signal transition time t , t is approximately equal to
 $3 * R_o * C_{RM}$, where R_o comprises said signal driver output resistance and C_{RM}
comprises said characteristic capacitance.
8. (Previously Presented) A method in accordance with claim 1,
comprising:
connecting said signal driver to a first end of said interconnection
path; and
connecting said transmission line to a second end of said
interconnection path.
9. (Previously Presented) A method in accordance with claim 2,
comprising:
connecting said signal driver to a first end of said interconnection
path; and
connecting said transmission line to a second end of said
interconnection path.
10. (Previously Presented) An integrated circuit, said integrated
circuit comprising:
a transmission line;
a signal driver characterized by an output impedance which drives a
signal onto a transmission line; and
redistribution metal connecting said signal driver to said transmission
line, said redistribution metal selected to be characterized by a redistribution
metal characteristic capacitance that is determined by calculating said
redistribution metal characteristic capacitance which together with said
signal driver output impedance will produce a resulting time constant on said
transmission line to achieve a desired slew rate on said transmission line

when said signal transitions from a first state to a second state.

11. (Previously Presented) An integrated circuit device in accordance with claim 10, wherein:

said redistribution metal characteristic capacitance comprises a value C_{RM} such that for a desired 95% full signal transition time t , t is approximately equal to $3 \cdot Z_D \cdot C_{RM} / 3 \cdot R_o \cdot C_{RM}$, where $Z_D \cdot R_o$ -comprises said signal driver output impedance.